DOCUMENT RESUME

ED 279 187 FL 016 495

AUTHOR Tottie, Gunnel
TITLE Is There an Adverbial in This Text? (And If So, What Is It Doing There?)
PUB DATE 84
NOTE 18p.; In: Ringbom, Hakan, Ed,; Rissanen, Matti, Ed. Proceedings from the Nordic Conference for English Studies Finland, May 19-21, 1983); see FL 016 498.
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Adverbs; Classification; *English; Form Classes (Languages); *Language Usage; Oral Language; Phrase Structure; Research Papers (Students); *Research Projects; *Semantics; Structural Analysis (Linguistics); *Student Projects; Word Frequency; Written Language
IDENTIFIERS *English (British)

ABSTRACT

The results of studies of English adverb usage undertaken by Swedish university students participating in a research and writing skills program are summarized. The studies focus on the incidence of structural and semantic types of adjuncts used in two samples of spoken and written British English. Frequency distributions are charted and accompanied by a narrative analysis. The research projects have produced insights into the frequency and types of adjuncts used. Similar research into this and other adverb types would be useful. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

N. Enkvist

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it

☐ Minor changes have been made to improve reproduction quality

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

ED279187

Gunnel Tottie
The Department of English
University of Uppsala

IS THERE AN ADVERBIAL IN THIS TEXT? (AND IF SO, WHAT IS IT DOING THERE?)[1]

1. Introduction

This paper is a preliminary report on a pilot study concerning the frequency and types of adverbials - semantic and structural - in two samples of spoken and written contemporary British English. It was carried out within the framework of the research project English in Speech and Writing and undertaken in part as a pedagogical experiment whose aim was to increase the productivity and writing skills of Swedish third-term undergraduates in the English department of Uppsala University. (Cf. Tottie et al 1983.) The pedagogical aspects of the experiment are accounted for elsewhere in this volume (Altenberg & Tottie). In what follows, I shall concentrate on the outcome of the scholarly endeavours of my students in the area of English adverbial usage. Of necessity, my goals were limited - firstly, by the amount of time allotted to the writing of term papers, and secondly, by the lack of sophistication of my aspiring but inexperienced assistant investigators.

The impetus of this work was David Crystal's article "Neglected grammatical factors in conversational English", published in 1980 in Studies in English Linguistics for Randolph Quirk. Crystal's main point in this article is that careful empirical study of specimens of spoken language will prove certain grammatical factors to be "rather more central" notions than is usually pointed out in linguistic accounts (cf. op cit, p 161).

One of the "neglected categories" pointed to by Crystal is the class of adverbials, and he demonstrates their importance in terms of frequency and integration into clause structure, in a specimen of surreptitiously recorded spontaneous conversation.[2] Crystal shows that in his sample containing 420 clauses, 246, or 59%, contain an adverbial. If introductory clauses of the type He said... are excluded, the proportion rises to 66%. Crystal also shows that 170/420, or c 40% of the clauses have adverbials that are either syntactically or semantically obligatory, whereas the adverbials are optional only in about 20%. These proportions conflict with the usual treatment of adverbials in grammars, where they are mostly treated as optional elements of clause structure. On the basis of his findings, Crystal suggests that Eng-

FL 016495

BEST COPY AVAILABLE

lish clause structure would be better described by means of a rule of the form

Clause $\rightarrow$ V + NP + AP

with optional deletion of the adverb phrase, than by the standard formulae not including APs.

One problem with Crystal's article is that although he convincingly shows the importance of adverbials in informal domestic conversation and thus amply supports the case for empirical study, there is no comparison with written material and thus no basis for a claim that adverbials - or indeed other grammatical factors - are more central in speech than in writing. Such a claim seems implicit in the title of the article. A comparison with written English is obviously imperative if we wish to substantiate either the claim that adverbials are more important in general in terms of frequency and integration into clause structure, or that they are more important in conversation than in written language.

Although there are many treatments of adverbs and adverbials in terms of semantic type, placement, etc, very few quantitative studies have been carried out.[3] Ellegård 1978, in his study of the syntactic structure of a 128,000-word subset of the Brown Corpus of American English, does provide some interesting quantitative data, which can be summarized as in table 1:

	Type of adverbial	Major	Sentence	Manner	All categs
Per 100 clauses	Clausal	13.9	-	.2	14.1
	Non-clausal	56	6.4	6.5	68.9
	Totals	69.9	6.4	6.7	83
Per 1000 words	Clausal	19.4	-	.3	19.7
	Non-clausal	78.6	8.9	9.0	96.5
	Totals	98	8.9	9.3	116.2

Table 1. The frequency of adverbials in 128 000 words of journalism, popular fiction, literary essays, and scientific text (in equal proportions) taken from the Brown Corpus. Cf. Ellegård 1978:31, 40 and 42, tables 9A, 15A and 15B.

Table 1 shows that there is, in Ellegård's material, an average of 68.9 non-clausal and 14.1 clausal adverbials per 100 clauses, or in all, 83 adver-

bials per 100 clauses. At first glance, then, it would seem as if there are, if anything, more adverbials per clause in written than in spoken material - cf the 59 - 66% recorded by Crystal. But the comparison is problematic: first of all, Crystal speaks only of clauses that "contain an adverbial" (1980:161), but does not specify whether he means just one adverbial, or at least one adverbial, and of course there is no way of telling how the adverbials in Ellegård's material are distributed. Another problem is the heterogeneity of Ellegård's material, which contains one-quarter fiction with conversational passages. Probably of less importance is the fact that Ellegård's written material consists of American English, although ideally of course, specimens of the same variety should be compared. In spite of these problems, however, Ellegård's data can certainly be interpreted as supporting the hypothesis of the "importance" of adverbials in written as well as spoken English.

Another interesting question about which little seemed to be known was the relation between adverbial meaning and structure. Quirk et al (1972:420), after pointing out that adverbial functions can be realized by a range of structures, go on to say: "Although it is true that some adverbial functions can be realized by the whole range of structures, others are chiefly realized by only certain structures." However, although there are scattered references to the quantitative relationship between the function and form of adverbials (esp pp 420f, 471, and 753), Quirk et al give no precise statements concerning frequencies of types, and nothing is said about differences between spoken and written English.

If we wish to study the distribution of structural and semantic types of adverbials in conversation and written English, we get no help from Crystal, this being outside the scope of his article, and only limited information from Ellegård, who provides only the distinctions shown in table 1, viz into clausal and non-clausal, and into major, sentence, and manner adverbials. Gustavsson 1982, who works with exactly the same material as Ellegård, provides a detailed subclassification of adverbials into semantic and functional categories based on Quirk et al 1972, ch 8, but as Gustafsson's concern is with topicalization, she gives data on fronted adverbials only, and we cannot assume that the same distributions hold for fronted adverbials as for adverbials in general.

It thus seemed worthwhile to make a comparative study of adverbials in spoken and written English with regard to their frequency and the distribution of structural and semantic types. Spontaneous conversation and informative prose were chosen as prototypical of each variety (cf Tottie et al 1983: 4f). British English was chosen as the target variant because of the availa-

bility of the London-Lund Corpus of Spoken English (LLC) and the Lancaster-Oslo-Bergen Corpus of Written English (LOB). The particular texts used for this study were taken from the "Mini" corpora selected for the research project English in Speech and Writing (see Tottie et al 1983:12 and 40). The research was organized to fit into a one-term undergraduate seminar in the Department of English at Uppsala University (cf Altenberg & Tottie, this volume), where each student was to spend five weeks in all on their papers. Each student analyzed 5000 words of spoken English and 5000 words of written English. At the moment of writing, five students have completed their work, and the material to be accounted for in what follows thus covers 50 000 words, or 25 000 words of each variety, drawn from the following texts:[4]

LLC: S.1.1, 1.7, 1.8, 1.9, 1.11
LOB: B texts (Press: editorial) 03, 07, 09, 15, 17
C text (Press: reviews) 03
F texts (Popular lore) 01, 24, 41
G texts (Belles lettres, biography, essays) 01, 03, 42, 73

The classification of adverbials is an awe-inspiring task even to experienced linguists, and in order to make the undertaking at all feasible to my students, I had to make a number of simplifications. We based our classifications mostly on Quirk & Greenbaum 1973, with some admixture of the typology of Svartvik & Sager 1978, those being the grammars that the students were familiar with. Like Crystal and Ellegård, we limited our investigation to cover adverbials as clause constituents, excluding modifiers. Thus, examples of type (1) were included, but not those of type (2):

(1) He frightened me terribly
(2) I was terribly frightened

However, comparative clauses were regarded not as modifiers but as adverbials, in contrast to Ellegård (1978:30) and Quirk et al (1972:733). Adverbial particles as parts of phrasal verbs were not included.

We decided to count disjuncts, conjuncts and adjuncts, but to make a detailed study only of the adjuncts. This category was further subclassified into the semantic categories of place, time, process (including manner and instrument adverbials as well as subject adjuncts), and degree. To these we added a ragbag category of 'other adjuncts', OAs for short, a cover term for adjuncts of purpose, cause, concession, comparison, and a small number of really difficult cases. This measure was adopted partly out of necessity, partly because these types were not numerically significant if taken indi-

vidually. Instances of not were included as a separate category among the adjuncts (cf Quirk et al 1972:432 Note) but will be accounted for separately as they offer no possibilities of structural variation that are interesting in this connexion.

Our working definitions can be summarized as in fig 1:

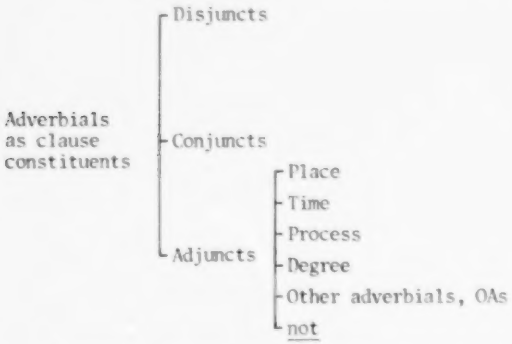


Fig 1. Classification of adverbials.

Subclassification into structural types was made according to Quirk et al (1972:420) into the six types listed below with the abbreviations that will be used and examples:

AP	Adverbial phrase	here
PP	Prepositional phrase	in London
NP	Noun phrase	this year
FC	Finite clause	when we talk
NFC	Non-finite clause	having said this
VLC	Verbless clause	Happy again, he smiled

One of the greatest problems we faced was choosing the unit of analysis against which to relate the frequency of adverbials. Crystal, an experienced linguist working with a very limited material, analyzed his specimens of conversation into clauses. We would have liked to follow suit but had to abandon the procedure simply because the students found it so difficult to make decisions concerning the spoken material that achieving any kind of uniform clausal analysis of our much larger material would have taken up too much of the available time. Instead, we had to resort to the method of relating the occurrence of adverbials to the total number of words examined. This is an expedient measure, and interesting per se, but it tells us nothing of the ratio of adverbials per clause.

Another problem was to decide how to count adverbials. Our policy was then

to isolate as many as possible. Thus, in (3), one could defend the analysis of in a café in Rome as either one or two adverbials, with in Rome either as a prepositional postmodifier of café, or as an independent adverbial:

(3) He met her in a café in Rome.

The two-adverbial analysis was chosen whenever possible, i e when one element was movable. Cf (4):

(4) In Rome, he met her in a café.

Similarly, coordinated adverbs were analyzed as two adverbials, as in (5):

(5) She smiled happily and sweetly.

If there was ellipsis of a preposition in a pair of coordinated adverbials, they were counted as one, however. Cf (6):

(6) This is true in the Midlands and Liverpool.

Not unexpectedly, we had difficulties in distinguishing between prepositional objects and adverbials. As Ellegård has pointed out (1978:17f) it is impossible to draw any hard and fast lines in this area, and intuition or a popular vote often had to be our guide. Thus, of the following sentences, we classified (7) and (9) as prepositional objects, but (8) and (10) as adverbials:

(7) He confined his thinking to this subject
(8) He confined his custom to a much smaller area

(9) The argument settles upon design
(10) They settled upon a hill

The rationale for our decisions was that (8) and (10) have a clearly spatial meaning but (7) and (9) do not.

Another source of difficulty was expressions with as, like, and than. Ellegård's exhaustive survey of different types of constructions (1978:109ff) including these items proved a useful basis for our work.

2. Results

2.1. The frequency of adverbials.

The total frequency of adverbials of all types, conjuncts, disjuncts, and adjuncts (not being accounted for separately) in the spoken and written samples (S and W) is shown in table 2.[5]

We see that the total number of adverbials is higher in S than in W: 3412 vs 2238, or 136.5 vs 89.5 per 1000 words. Disjuncts are much more frequent in S than in W: 282 vs 75, or 11.3 vs 3 per 1000 words. This is not unexpect-

	Conjuncts	Disjuncts	Adjuncts excl. *not*	*not*	All
S totals	122	282	2475	533	3412
Freq/1000 words	4.9	11.3	99	21.3	136.5
W totals	138	75	1864	161	2238
Freq/1000 words	5.5	3	74.6	6.4	89.5

Table 2. Overall distribution of different types of adverbials in two samples of spoken and written English (S and W) of 25 000 words each.

ed; attitudinal disjuncts such as *frankly*, *honestly*, etc, abound in conversation but hardly in writing. Similarly, the much higher frequency of *not* in S than in W was predictable (cf Tottie 1982:89f): 533 in S vs 161 in W, or 21.3 vs 6.4 per 1000 words.[6] A less predictable finding was that there were many more adjuncts in S than in W: 2475 compared with 1864 in W. What this means in terms of the frequency of adjuncts in particular or adverbials in general per clause is difficult to say, but it seems plausible that the number of clauses in the S material is higher than in W - we know that written English, propositions are nominalized to a much larger extent than in spoken English (cf eg Chafe 1982). We may therefore infer that the number of predicates per 1000 words is lower in W than in S, (cf Altenberg, this volume), and therefore, that the adverbial-to-clause ratio may not be as different in S and W as the ratio of adverbials per 1000 words. This is clearly an area where much more work is necessary before we can establish the facts.

We may compare the findings of the present study with those presented by Ellegård 1978 and Crystal 1980. Our total figure for adverbials in W is 2238, or 89.5 per 1000 words, compared with Ellegård's 116.2 average. It is difficult to explain the discrepancy between Ellegård's average and ours. To some extent it can be accounted for by the presence of category N texts (popular fiction) in Ellegård's sample. N texts have a much higher incidence of especially clausal adverbials than the other categories (cf Ellegård 1978:31, 40, 42, tables 9A, 15A, and 15B). The N texts have 137.9 adverbials per 1000 words, whereas the frequencies for the other text categories are considerably lower: A texts 102.7, G texts 117.7, and J texts (learned and scientific writing) 107 adverbials per 1000 words. Our sample contained about one-half journalistic prose (categories B and C but not category A), and the rest was F and G texts. It might therefore perhaps have been expected to fall somewhere between 102 and 117 adverbials per 1000 words, or around 110. I cannot

at present explain the differences in frequency; we followed the same principles as Ellegård in that we included not and excluded verbal particles in phrasal verbs. One possible source of the discrepancy is the classification of prepositional objects and adverbials, where we may have been more restrictive in assigning the label adverbial than Ellegård (cf above and Ellegård 1978:17f). The possibility of there being a real difference in the frequency of adverbials in British and American English seems a remote one.

A comparison between our spoken data and Crystal's is even more difficult, as Crystal only gives the incidence of adverbials per clause, not per any given number of words. He indicates that his sample consists of 13 minutes of conversation (1980:154, fn 1). One hour of conversation equals approximately 10 470 words (this figure is an average based on Oreström 1983:46, table 2, excluding subtext 1.2:1), and Crystal's sample would thus consist of c 2270 words. 246 adverbials per 2270 words equals c 108 per 1000 words, a lower figure than our 136.5 average. This difference could be due in part to the fact that Crystal does not include clauses functioning as adverbials among his examples, and in part to our being more generous in assigning the label adverbial to prepositional phrases - cf the discussion of (4) above. Also, it is not clear whether Crystal includes not as an adverbial. A comparison with Crystal would require a complete re-analysis of his material, which is beyond the scope of the present day.

One preliminary conclusion can definitely be drawn from the above-mentioned attempts at comparisons between different sets of data: Adverbials are certainly one of the most elusive functional categories, definable in many different ways, and comparative studies must therefore be based on shared assumptions and definitions to be valid, or indeed possible.

Let us proceed to consider the incidence of structural and semantic types of adjuncts in our own material.

2.2. The occurrence of semantic and structural types of adjuncts.

Table 3 gives a cross-tabulation of the totals of semantic and structural types of adjuncts in our material, spoken as well as written. It gives raw figures as well as frequencies of structural and semantic categories per 1000 words.

If we wish to compare the distribution of semantic categories or structural types of adjuncts in S and W, we can choose between two different measures. We can either compare frequencies per a given number of words, e g 1000 words as suggested here, or we can compare intra-variety proportions, suitably expressed as percentages. The former measure is an absolute one; it tells us

		Place	Time	Process	Degree	OA	All	Freq/ 1000 words
	AP	243	353	128	214	158	1096	43.8
	PP	529	185	56	19	52	841	33.6
	NP	23	155	13	24	5	220	8.8
S	FC	10	79	3	-	170	262	10.5
	NFC	1	8	9	-	27	45	1.8
	VLC	-	3	2	-	6	11	.4
	All	806	783	211	257	418	2475	
Freq/1000 words		32.2	31.3	8.4	10.2	16.7	99	
	AP	70	198	141	70	140	619	24.8
	PP	493	170	106	15	57	841	33.6
	NP	9	41	14	3	18	85	3.4
W	FC	3	43	11	1	144	202	8.1
	NFC	6	21	12	-	62	101	4
	VLC	1	2	2	-	11	16	.6
	ALL	582	475	286	89	432	1864	
Freq/1000 words		23.3	19	11.4	3.6	17.3	74.6	

Table 3. Overall distribution of semantic and structural categories of adjuncts in two samples of spoken and written English (S and W) of 25 000 words each.

what the overall likelihood of encountering a particular type of adjunct is in S or W. The second measure is a proportion of the total likelihood of encountering an adjunct in a particular variety. Both measures are interesting; which one we choose depends on our purposes. I have given both measures in tables 4 and 5 but will refer to proportions in the text; readers interested in frequencies per thousand words can easily find those in the tables.

Table 4 shows the distribution of semantic categories over the two samples of S and W to be remarkably similar. Place adverbials constitute the most frequent type in both varieties (33% in S, 31% in W), closely followed by time adverbials (32% in S, 25% in W); together, these types make up some 60% of the adjuncts in either variety. Process and degree adverbials together account for another 20% in each sample, but in different proportions: in S, there are 9% process and 10% degree adjuncts, whereas in W, there are 15%

		Place	Time	Process	Degree	OAs	n
S	Freq/1000 words	32.2	31.3	8.4	10.2	16.7	
	%	33%	32%	9%	10%	17%	2475
W	Freq/1000 words	23.2	19	11.4	3.6	17.3	
	%	31%	25%	15%	5%	23%	1864

Table 4. The frequency and proportions of semantic categories of adjuncts in S and W.

process and 5% degree adjuncts. The remainder, 17% in S and 23% in W, is made up of the "other adjuncts", mostly expressing cause, concession, condition, comparison, etc.

		AP	PP	NP	FC	NFC	VLC	n
S	Freq/1000 words	43.8	33.6	8.8	10.5	1.8	.4	
	%	44%	34%	9%	11%	2%	.4%	2475
W	Freq/1000 words	24.8	33.6	3.4	8	4	1.6	
	%	33%	45%	5%	11%	5%	.8%	1864

Table 5. The frequency and proportions of structural types of adjuncts in S and W.

Table 5 shows the frequency and proportions of the structural types of adjuncts across the two samples of S and W. Again, two types are predominant, viz in this case adverb phrases and prepositional phrases. Together, they account for 78% of all the adjuncts in either variety, with APs dominating in S (44% vs 34% PPs), and PPs dominating in W (45% vs 33% APs). The proportions of NPs are much lower - 9% in S and 5% in W; our data thus amply bear out the statement by Quirk et al (1972:420) that NPs are "less common" as realizations of adverbials than APs. Finite clauses account for 11% of the adjuncts in each variety, and non-finite clauses for only 2% in S and 5% in W. Verbless clauses proved extremely infrequent - they accounted for less than 1% in either variety, viz .4% in S and .8% in W. These findings concerning the proportions of structural types in S and W are supported

by similar results of ongoing research at the Survey of English Usage (Randolph Quirk, personal communication).

Table 6 shows the proportions of structural realizations of different semantic categories of adjuncts in S and W, expressed as percentages. I have deliberately refrained from giving frequencies per 1000 words here, for the simple reason that some of the cells would then contain extremely low numbers expressed as fractions, and it seems just as easy to compare the actual frequencies for the 25 000-word samples in table 3, on which table 6 is based.

	Place		Time		Process		Degree		OA	
	S	W	S	W	S	W	S	W	S	W
AP	30%	12%	45%	42%	61%	49%	83%	79%	38%	32%
PP	66%	85%	24%	36%	27%	37%	7%	17%	12%	13%
NP	3%	2%	20%	9%	6%	5%	9%	3%	1%	4%
FC	1%	1%	10%	9%	1%	4%	-	1%	41%	33%
NFC	.1%	1%	1%	4%	4%	4%	-	-	6%	14%
VLC	-	.2%	.4%	.4%	1%	1%	-	-	1%	3%
n	806	582	783	475	211	286	257	89	418	432

Table 6. The structural realizations of different semantic categories of adjuncts in S and W.

As pointed out by Quirk et al (1972:471), most place adjuncts are prepositional phrases (like in my bag, at home, into Spain, at Brighton, from the Commonwealth, to take a random selection from our sample, S.1.1 and B 15): 66% in S and 85% in W. Quirk et al (ibid) are also correct in stating that place adjuncts are "less frequently" clauses: indeed, only 1.1% are clausal in S, and 2.2% in W. Adverb phrases occupy an intermediate position between prepositional phrases and clauses, with 30% in S and 12% in W. The higher incidence of APs in S (and the correspondingly lower frequency of PPs) is presumably due to the tendency to use deictics, such as here, there, in conversation (cf above). Finally, NPs account for a small proportion in either sample: 3%in S and 2% in W.

Not surprisingly, time adjuncts are realized predominantly by adverb phrases (now, then, again, always, never, today, tomorrow, to take a

selection from text S.1.1): 45% in S, 42% in W. Prepositional phrases (like at the moment, after that, from the twenty-ninth of June, to the eighth of July /S.1.1/) are runners-up: 24% in S, 36% in W. Noun phrases (next year, last Wednesday, this week... /S.1.1/) are proportionately more frequent in S than in W: 20% vs 7%. Finite clauses account for low but similar proportions in S and W: 10% vs 9% (cf examples like when we were setting that kind of question /S.1.1.1176/, while those questions survive /S.1.1.1071/...). Non-finite clauses are, again, unusual in both varieties, though proportionately more frequent in W (4%) than in S (1%). Verbless clauses are at the bottom of the list: .4% in either variety.

About 85% of all process adjuncts are realized by either adverb phrases (like voluntarily, heavily, sharply, effectively... /B15/) or prepositional phrases (like by means of restrictions, without racial discrimination, with an air of triumph... /B 15/) in S as well as in W. APs are in the majority in both varieties, although in somewhat different proportions (61% APs in S, 49% in W, compared with 27% PPs in S, 37% in W). All other structural types are represented, noun phrases and non-finite clauses being more common than finite or verbless clauses (6% NPs in S, 5% in W, 4% NFCs in either variety).

Adjuncts of degree are mostly realized by adverb phrases in S as well as in W (83% and 79%, respectively), the rest being mostly prepositional phrases (7% in S, 17% in W) and noun phrases (9% in S, 3% in W). Clausal degree adverbials were almost entirely absent: only a single instance (1%) occurred in W.

The "other adjuncts" are mostly realized by either adverb phrases or finite clauses (38% APs in S and 32% in W, 41% FCs in S, and 33% in W). The proportion of prepositional phrases is about the same in S and W (12% and 13%, respectively). NPs are rare: 1% in S and 4% in W. If we look at the total of clausal OAs, including non-finite and verbless clauses, we see that they account for 48% of all OAs in S, and 50% in W. There is thus a strong - and expected - correlation between the semantic category of adjuncts expressing cause, concession, condition, and comparison, and clausal form.

This correlation is brought out even more strongly by table 7, which shows the proportions of semantic categories distributed over the structural types of adjuncts. Again, the reader is referred to table 3 for actual frequencies. Table 7 shows that finite clauses are used almost exclusively as either time adjuncts or as OAs (30% vs 65% in S, 21% vs 71% in W). Typical examples are if he lives to see his Utopia come true, once the British employment market begins to reach saturation point /B 15/. Non-finite clauses are used as time and process adjuncts, but occur especially in OA function (18%, 20%, and 60%,

	AP		PP		NP		FC		NFC		VLC	
	S	W	S	W	S	W	S	W	S	W	S	W
Place	22%	11%	63%	59%	10%	11%	4%	1%	2%	6%	-	0%
Time	32%	32%	22%	20%	70%	48%	30%	21%	18%	21%	27%	13%
Process	12%	23%	7%	13%	6%	16%	1%	5%	20%	12%	18%	13%
Degree	20%	11%	2%	2%	11%	4%	-	.5%	-	-	-	-
OAs	14%	23%	6%	7%	2%	21%	65%	71%	60%	61%	55%	69%
n	1096	619	841	841	220	85	262	202	45	101	11	16

Table 7. The distribution of semantic categories over structural types of adjuncts in S and W.

respectively, in S, and 21%, 12% and 61% in W). When set beside the existing structure /B 07/, by asking us to value old music /G 42/, and ... the liquidation of the firm to pay death duties /B 07/ are examples from our corpus. Similar proportions hold for verbless clauses (27% time, 18% process, and 55% OAs in S, compared with 13% time, 13% process, and 69% OAs in W). It should be remembered, however, that the total number of verbless clauses is very low, which means that these proportions must be regarded with some caution.

If we look at the other structural categories, we see that adverb phrases are the most versatile type: although they mostly function as time adjuncts (32% in S as well as in W), they occur in between 10 and 20% in all functions; cf table 7 for details. Prepositional phrases and noun phrases, on the other hand, each favour one particular semantic category: PPs occur mostly as realizations of place adjuncts (63% in S, 59% in W), and much less frequently yy as any other type. Time adjuncts (22% in S, 20% in W) are the most frequent ones among the other categories, and except for 13% process adverbials in W, there is a mere sprinkling (2 - 7%) of the other types.

Noun phrases occur mostly as time adjuncts, this tendency being most pronounced in S (70%, compared with 48% in W) and obviously due to the abundance of expressions like next week, this afternoon, this year, etc. (This is corroborated by research at the Survey of English Usage; Randolph Quirk, personal communication.). NPs also serve as place adjuncts in similar proportions in S and W (10% vs 11%). The other semantic categories are realized by NPs to very different extents: There are 6% process adjuncts in S but 16% in W, 11% degree adjuncts in S but 4% only in W, and 2% OAs in S, but 21% in W. Notice, however, that the W proportions here are based on a much lower

number of instances than S, or 85 vs 220, and that the percentages may therefore be somewhat uncertain.

3. Conclusions and prospects

We may sum up the results of our investigation as follows: In our two samples of 25 000 words each of spoken and written English, S and W, adverbials were more frequent in S than in W: 136.5 per 1000 words in S, compared with 89.5 in W. At least in part, this difference could be due to the higher incidence of disjuncts and negative expressions in S. Table 2 shows that the frequency of not is higher in S than in W, and we have reason to suspect that other negative expressions are also more frequent in S than in W - cf Tottie 1982:89f. Whether there are also more adverbials per clause in S than in W remains to be established, pending a breakdown of our material into clauses.

The proportions of structural and semantic types are mostly similar in S and W, but there are some differences. Adverbs and adverb phrases and prepositional phrases are the most common types in S as well as W, together accounting for almost 80% of all adjuncts in either variety, but APs dominate in S (44%) and PPs in W (45%) - cf table 5. Finite clauses represent 11% of the total in S as well as in W; NPs are more important in S (9%) than in W (5%). Non-finite and verbless clauses occur in low proportions (5% or less) in both varieties, but are twice as frequent in W as in S (cf table 5). These findings are supported by ongoing research at the Survey of English Usage (Randolph Quirk, personal communication).

Most adjuncts express location in time or space (about 60% in both varieties), place adjuncts being somewhat more frequent than time adjuncts. Process adjuncts are more important in W (15%) than in S (9%), whereas the reverse is the case with degree adjuncts. Expressions of cause, concession, condition, etc, account for c 17% of the adjuncts in either variety. As Crystal points out (1980:165), these data may be compared with studies concerning language acquisition by children, where expressions of time and, especially, place are shown to be acquired at an early stage. The studies quoted by Crystal are supported by Strickland 1962 (English) and Valiquette 1978 (French), quoted by Dubuisson et al 1981. The need for "locating language in time and space" is obviously present from an early stage and continues to make itself felt in adults.[7]

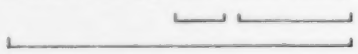
As I stressed at the outset, this is a preliminary report. The time limitations imposed on our study precluded an exhaustive analysis even of those adverbials, i e the adjuncts, that we paid most attention to, and the material we already have at hand would certainly yield valuable insights if examined more closely. The most obvious target for further research would of

course be the motley category of "other adverbials", which needs to be broken down into more well-defined semantic types. It would be particularly interesting to study the distribution of the various clausal OAs to ascertain the frequencies of causal, conditional, and concessive relations in spoken and written language (to the extent of course that these relations are expressed by means of adverbials, clausal or not).[8] A detailed examination of the adjuncts of time, place, process, and degree would certainly also be rewarding. Within the limited space at my disposal here, it has only been possible to account for structural types in the most general terms of frequencies and proportions, and to illustrate these by thin sprinklings of actual linguistic examples. It would presumably be revealing to study the actual lexical items which constitute these structures to determine important semantic substructures. Thus it is obvious that e g place adjuncts can be divided into different types expressing either location at a point in space or direction to or from one, and it would certainly be interesting to find out how these types are distributed in spoken and written language, as well as the proportions and types of deictics (here, there) vs more specific adverbials (on the table, in London). A number of the items classified as place adjuncts also seem to have a "metaphorical" or abstract meaning, e g at this point, in this connexion. It would be interesting to know the extent to which such expressions occur, as well as possible differences between spoken and written language.

Finally, we left the major categories of disjuncts and conjuncts unaccounted for - a closer look at these would certainly be rewarding.

In addition to studying types of adverbials in detail, it would also be interesting to know what proportion of written or spoken text is likely to consist of adverbials. The preceding account has only dealt with adverbials in terms of the frequency of individual items, but not with their length. We did keep track of this factor, however, and moreover, we classified adverbials at different "levels". Adverbials are frequently embedded in other adverbials, as in (11):

(11) After finishing early that Monday, John left.



It would be vacuous and misleading to state merely that this seven-word sentence contains eight words of adverbials (which it does, counting the when-clause, early, and that Monday as separate units). We therefore decided to classify adverbials at two levels (cf Ellegård's notion of "depth", 1978:26 ff), level one consisting of adverbials not contained in other adverbials, and level two comprising adverbials within adverbials. When we analyze these data,

we will be able to establish what proportion of the total amount of text consists of adverbials by including only level one items.

What I have been able to show in this article is thus merely the tip of an iceberg. However, I am confident that further empirical research in the area of adverbial usage will prove fruitful and yield insights both into the workings of the English language as a whole, and of spoken and written varieties. These insights promise to be of linguistic, pragmatic, and psychological interest, increasing our knowledge of usage and use and giving us information concerning the constraints on language production and processing in different communicative situations.

NOTES

1. I am grateful to Professor Randolph Quirk for reading an early draft of this paper and then graciously giving me access to some unpublished results of ongoing research at the Survey of English Usage, University College London, concerning adverbial usage. I am also deeply indebted to Bengt Altenberg for penetrating comments on many vital points, and for interesting discussions of method as well as matter. Most of all, I wish to thank my students, Monica Berggren, Christina Carlsson, Marie Fagerberg, Karin Hammarstig, Marita Johansson, and Ann-Charlotte Sandberg, for contributing enthusiasm and hard work to this project. Any remaining inadvertencies are my own responsibility.

2. The material used consists of texts 1, 3, and 8 from Crystal and Davy 1975, a total of thirteen minutes of conversation. After removing 120 minor sentences and comment clauses, Crystal was left with 420 clauses to analyze for the purposes of his 1980 paper. Cf Crystal 1980:156, fn 2.

3. See e g Bartsch 1972, Greenbaum 1969, Jacobson 1964 and 1978. Kramský 1975 examines the frequency of occurrence of adverbs in fiction, plays and "special" (i e scientific) style but attempts no full coverage of the functional category of adverbials.

4. LLC texts are 5000 words long, LOB texts 2000 words long. Only the first half of B 07 was included.

5. S and W refer to the samples used for this study, and the terms spoken and written English are used for general reference. Although it is difficult to make explicit claims concerning the representativity of our corpora or subsamples, it seems reasonable to assume that extrapolation from our samples is possible.

6. Notice that the frequencies per 1000 words given for negatives in Tottie 1982 are higher than the not frequencies in table 2 because they comprise a wider range of items.

7. The fact that Dubuisson et al 1981 found a majority of manner adverbials in their elicited French data must be due to the fact that they asked their subjects to write down rules for games.

8. Many of these relations can of course be expressed by other means, e g parataxis. Cf Altenberg, in press.

REFERENCES

Altenberg, Bengt. This volume. "Lexical and sex-related differences in spoken and written English. Some results of undergraduate research at Lund

University".

Altenberg, Bengt. In press. "Causal connexion in spoken and written English". Studia linguistica 38.

Altenberg, Bengt & Gunnel Tottie. This volume. "Will there be texts in this class?"

Bartsch, Renate. 1972. Adverbialsemantik. Frankfort on the Main: Athenäum.

Chafe, Wallace. 1982. "Integration and involvement in speaking, writing and oral literature". Spoken and written language: Exploring orality and literary, ed by Deborah Tannen. Advances in discourse processes. Norwood, N.J.: Ablex.

Crystal, David. 1980. "Neglected factors in conversational English". Studies in English linguistics for Randolph Quirk, ed by Sidney Greenbaum, Geoffrey Leech and Jan Svartvik. London: Longman. 153-166.

Crystal, David & Derek Davy. 1975. Advanced conversational English. London: Longman.

Dubuisson, Colette, Louisette Emirkanian & Isabelle Mahy. 1981-82. "L'expression de la circonstance dans le texte écrit de l'enfant". Revue de l'association québécoise de linguistique. 1.

Ellegård, Alvar. 1978. The syntactic structure of English texts. Gothenburg Studies in English 43.

Greenbaum, Sidney. 1969. Studies in English adverbial usage. London: Longman.

Gustafsson, Marita. 1982. "Textual aspects of topicalization in a corpus of English". ICAME News 6. 46-73.

Jacobson, Sven. 1964. Adverbial positions in English. Stockholm: Dept of English, University of Stockholm (earlier AB Studentbok).

Jacobson, Sven. 1978. On the use, meaning and syntax of English preverbal adverbs. Stockholm Studies in English 44.

Krámský, Jirí. 1975. "Stylostatistical investigation into the frequency of occurrence of adverbs in modern English". Prague Studies in English 16. 23-31.

Oreström, Bengt. 1983. Turn-taking in English conversation. Lund Studies in English 66.

Quirk, Randolph, Sidney Greenbaum, Geoffrey Leech & Jan Svartvik. 1972. A grammar of contemporary English. London: Longman.

Quirk, Randolph & Sidney Greenbaum. 1973. A university grammar of English. London: Longman.

Strickland, R. 1962. "The language of elementary school children". Bulletin of the School of Education, Indiana University.

Svartvik, Jan & Olof Sager. 1978. Engelsk universitetsgrammatik. Stockholm: Esselte Studium.

Svartvik, Jan & Randolph Quirk. 1980. A corpus of English conversation. Lund: Gleerup.

Tottie, Gunnel. 1982. "Where do negative sentences come from?" Studia linguistica 36. 88-105.

Tottie, Gunnel, Bengt Altenberg & Lars Hermerén. 1983. English in speech and writing. A manual for students. ETOS Report 1. The departments of English at the Universities of Lund and Uppsala.

Valiquette, J. 1978. Critères de maturation syntaxique de l'écrit des enfants du primaire. Paper read at the University of Québec at Montréal.